

CLAIMS

1. Jack (100, 100') comprising a sleeve (120) provided with an opening (121), an actuation rod (140) comprising an axial cavity (141) and a thread (142) and capable of moving in the said opening (121), a drive
5 screw (130) inserted in the said axial cavity (141) and capable of cooperating with the said thread (142) so as to displace the said rod (140) in the said sleeve (120) and in the said opening (121), a toothed drive wheel (150) coupled to the drive screw (130), a worm screw
10 (160) that can be connected to the shaft (210) of a drive motor (200) and that can cooperate with the drive wheel (150) so as to rotate it, and characterised in that the centre-to-centre distance E between the axis R of the drive wheel (150) and the axis V of the worm
15 screw (160) is between 100 and 350 mm, and in that the reduction ratio RR between the worm screw (160) and the drive wheel (150) is between 300:1 and 80:1.

2. Jack (100, 100') according to claim 1, characterised in that the centre-to-centre distance E
20 is between 150 and 300 mm.

3. Jack (100, 100') according to claim 1, characterised in that the centre-to-centre distance E is between 180 and 290 mm.

4. Jack (100, 100') according to any one of
25 claims 1 to 3, characterised in that the reduction ratio RR is between 100:1 and 250:1.

5. Jack (100, 100') according to any one of claims 1 to 3, characterised in that the reduction ratio RR is between 140:1 and 200:1.

6. Jack (100, 100') according to any one of claims 1 to 5, characterised in that the worm screw (160) of the jack is, or could be, directly engaged on the shaft (210) of a drive motor (200).

5 7. Jack (100, 100') according to any one of claims 1 to 6, characterised in that the average diameter D of the drive screw (130) is less than 150 mm.

10 8. Jack (100, 100') according to any one of claims 1 to 6, characterised in that the average diameter D of the drive screw (130) is between 50 and 120 mm.

15 9. Jack (100, 100') according to any one of claims 1 to 6, characterised in that the average diameter D of the drive screw (130) is between 75 and 105 mm.

20 10. Jack (100, 100') according to any one of claims 1 to 9, characterised in that the thread (142) is formed on a threaded end piece (143) that is fixed to the inside end (144) of the actuation rod (140) or is part of it.

11. Jack (100, 100') according to any one of claims 1 to 10, characterised in that the thread pitch (142) is between 14 and 20 mm.

25 12. Jack (100, 100') according to any one of claims 1 to 10, characterised in that the thread pitch (142) is between 16 and 18 mm.

30 13. Jack (100, 100') according to any one of claims 1 to 12, characterised in that the drive wheel (150) is fixed to the drive screw (130), or is part of it, and in that the axis of rotation R of the drive

wheel (150) and the axis of rotation T of the drive screw (130) coincide so as to form a common axis of rotation A.

5 14. Use of a jack (100, 100') according to any one of claims 1 to 13 for the displacement of an anode frame (12) of a superstructure (10) of an electrolytic cell (1) designed for the production of aluminium.

10 15. Superstructure (10) to be installed in an electrolytic cell (1) for the production of aluminium and comprising an anode frame (12) and at least one jack (100, 100') according to any one of claims 1 to 13 to displace the said frame.

16. Electrolytic cell (1) provided with a superstructure (10) according to claim 15.